

ABSTRACT

1 A micro-controller direct memory access (DMA) unit
2 includes hardware support for single read of the source
3 address at a source word size and but writes to the target
4 address at an independent target word size. This permits, for
5 example, a single read of the source address at a larger word
6 size and multiple sub-word sized writes to the target address.
7 This is enabled by independent control register storage of a
8 source word size, a source increment size, a target word size
9 and a target increment size. A byte shifter/register that
10 will shifts a full byte at a time to the next lower byte
11 position allowing transfer of a large word to a destination
12 having a small word size.